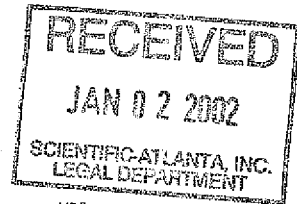


PATENT COOPERATION TREATY



From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

WRITTEN OPINION

(PCT Rule 66)

To: KELLY A. GARDNER
SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
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LAWRENCEVILLE, GA 30044

Date of Mailing
(day/month/year)

27 DEC 2001

Applicant's or agent's file reference

F-6280-PC

REPLY DUE

within TWO months
from the above date of mailing

International application No.

PCT/US00/33837

International filing date (day/month/year)

14 DECEMBER 2000

Priority date (day/month/year)

14 DECEMBER 1999

International Patent Classification (IPC) or both national classification and IPC
IPC(7): H04B 1/66 and US Cl.: 725/95

Applicant

SCIENTIFIC-ATLANTA, INC.

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.8. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 14 APRIL 2002

Name and mailing address of the IPEA/US

Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Authorized officer

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WRITTEN OPINION

International application No.

PCT/US00/33837

I. Basis of the opinion**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed
- ☒ the description:
pages 1-32, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____
- ☒ the claims:
pages 33-38, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____
- ☒ the drawings:
pages 10, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____
- ☒ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".

WRITTEN OPINION

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims	NONE	YES
	Claims	1-32	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-32	NO
Industrial Applicability (IA)	Claims	1-32	YES
	Claims	NONE	NO

2. citations and explanations

Claims 1, 3-11, 15-16, 18, 21, 25-26, and 28-32 lack novelty under PCT Article 33(2) as being anticipated by Kalra et al (5,953,506).

Kalra et al disclose a method/a video decoding system for adapting to resource constraints, comprising the steps of: determination logic configured to determine whether a resource constrained mode is to be initiated (col. 17, lines 25-55); and initiation logic configured to initiate the resource constrained mode responsive to the determination logic, including foregoing decoding of portions of received video input (Fig. 9C; col. 17, lines 56-67; col. 18, lines 1-24) as specified in claims 1, 15-16, 21, and 25-26.

Regarding claims 3, 18, and 28, Kalra et al disclose inadequate bandwidth availability (col. 17, lines 10-24) as specified.

Regarding claims 4 and 5, Kalra et al disclose an user interaction (col. 2, lines 18-23) as specified.

Regarding claim 6, Kalra et al disclose reducing spatial resolution of video output (Fig. 28; col. 3, lines 60-62) as specified.

Regarding claim 7, Kalra et al disclose user interaction causing graphics to be generated and output along with the video output (Fig. 2B) as specified.

Regarding claim 8, Kalra et al disclose receiving from a video transmitter data describing the received video input (20) as specified.

Regarding claim 9, Kalra et al disclose MPEG (Fig. 5) as specified.

Regarding claims 10 and 11, Kalra et al disclose decoding B and P frames (Fig. 4) as specified.

Kalra et al disclose a decoding method comprising the steps of: determining that a video decoding rate should be reduced while maintaining synchronization with an unmodified audio decoding rate and reducing the video decoding rate accordingly (col. 17, lines 25-55) as specified in claims 29-30.

Kalra et al disclose a decoding method comprising the steps of: determining whether a picture repetition mode should be initiated and initiating a mode of repeating picture (col. 12, (Continued on Supplemental Sheet.)

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

lines 1-11) as specified in claim 31.

Regarding claim 32, Kalra et al disclose resource constrained mode being determined (col. 17, lines 10-55) as specified.

Claims 2, 12-14, 17, 19-20, 22-24, and 27 lack an inventive step under PCT Article 33(3) as being obvious over Karla et al (5,953,506).

Regarding claims 2, 17, and 27, even though Kalra et al do not particularly determine the resource constraint being initiated responsive to inadequate memory availability, it is well known in the art to compensate for a limited memory resource. Furthermore, Kalra et al determine the resource constraint being initiated responsive to inadequate bandwidth availability. Therefore, it is considered quite obvious for determining the resource constraint being initiated responsive to inadequate memory availability.

Regarding claim 12, Kalra et al disclose foregoing decoding of a plurality of frames (Fig. 9C; col. 17, lines 56-67; col. 18, lines 1-24), and repeating presentations of decoded frames (col. 12, lines 1-11). Therefore, it is considered quite obvious to repeat presentations of decoded frames in place of the plurality of frames that are not decoded.

Regarding claims 13-14, Kalra et al disclose decoding I and P frames (Fig. 4) as specified.

Regarding claims 19-20, utilizing look-up-table (col. 11, lines 1-17) and a record keeping of a history of resource need are well known the art. Therefore, it is considered quite obvious for determining the amount of additional resource according to a look-up-table or a history of resource need.

Regarding claim 22, it is considered nothing more than a simple design choice to maintain existing resource priorities controlling devices using the resources.

Regarding claim 23, it is considered nothing more than a simple design preference to utilize a digital home terminal including an interrupt driven CPU that is notified when a resource becomes constrained.

Regarding claim 24, it is considered nothing more than a simple design choice to present an audio to a user at a regular rate and maintaining audio and video synchronization during the resource constrained mode.

NEW CITATIONS

US 5,953,506 A (KALRA et al) 14 SEPTEMBER 1999, see fig. 9C, and column 17, lines 25-67.

US 5,836,003 A (SADEH) 10 NOVEMBER 1998, see column 45, lines 15-51.